



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL A. ABRACZINSKAS
Director

MM DD, 2017

Mr. Alan Toney
Manufacturing Manager
Electric Glass Fiber America, LLC
473 New Jersey Church Road
Lexington, NC 27292

Dear Mr. Toney:

SUBJECT: Air Quality Permit No. 02688T42
 Facility ID: 2900109
 Electric Glass Fiber America, LLC
 Lexington, North Carolina
 Davidson County
 Fee Class: Title V
 PSD Status: Major

In accordance with your completed Air Quality Permit Application for the modification and name change of your Title V permit received May 15, 2017 and September 19, 2017, we are forwarding herewith Air Quality Permit No. 02688T42 to Electric Glass Fiber America, LLC, 473 New Jersey Church Road, Lexington, Davidson County, North Carolina, authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Davidson County has triggered increment tracking under PSD for PM₁₀. Any increment changes associated with this modification were addressed in the Part 1 permit application (application no. 2900109.15B).

This Air Quality Permit shall be effective from MM DD, 2017 to August 31, 2020 is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Joseph Voelker, P.E., at (919) 707-8730.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4
Winston-Salem Regional Office
Central Files
Connie Horne (cover letter only)

ATTACHMENT to Cover Letter to Air Quality Permit Number 02688T42

Table of Changes

Table of Changes

Existing Condition No.	New Condition No.	Changes
GLOBAL	Same	<ul style="list-style-type: none"> Changed name of facility to Electric Glass Fiber America, LLC
Permit page one	Same	<ul style="list-style-type: none"> Revised dates, permit numbers, etc. using current shell standards
Cover Letter	Cover Letter	<ul style="list-style-type: none"> Used current shell language, updated permit numbers, dates, etc.
Insignificant activities list	Same	<ul style="list-style-type: none"> Added reference to IES-VS – Housekeeping vacuum system exhausting indoors Removed reference to IESTE 168, 169 and 170 as they have been removed from the facility.
Section 1 – Permitted Equipment list	Same	<ul style="list-style-type: none"> Removed the 15A NCAC 02Q .0501(c)(2) application submittal requirement footnote for the forehearth of furnace 507. This application satisfied this requirement. For ESDG94 – the descriptor was revised from No. 1 to No. 2 here and throughout permit
GLOBAL	Same	<ul style="list-style-type: none"> Replaced “assure” with ensure” (except in the General Conditions) consistent with current permitting practice.
2.1 F.4.c.i.	same	<ul style="list-style-type: none"> Removed reference to “gal/month.” The furnace no longer burns liquid fuel.
2.1 F.8	NA	<ul style="list-style-type: none"> 02Q .0504 application submittal requirement condition was removed. The current application satisfied this requirement
2.1.G.1.c.i	Same	<ul style="list-style-type: none"> Added the following language at the request of the permittee. <i>The most recent demonstration was December 2016.</i>
2.2 B.2	NA	<ul style="list-style-type: none"> 02D .0958 condition was removed as it is no longer applicable. All references to this rule throughout the permit were removed
2.2 D.1	Same	<ul style="list-style-type: none"> Consistent with current permitting practice, added a projected actual emissions table for Furnace 503. These are not limits but rather a tool to assess if the original projections were correct.
Section 3 General Conditions	Same	<ul style="list-style-type: none"> Section was revised from version 4.0 (12/17/2015) to 5.1(08/03/2017) Changes include: <ul style="list-style-type: none"> Condition LL was revised to clarify that the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes. Condition MM – removed STATE ENFORCEABLE ONLY; added comma after process areas to clarify intent

ATTACHMENT to Air Quality Permit Number 02688T42

Insignificant Activities per 15A NCAC 2Q .0503(8)

Emission Source ID	Emission Source Description
IESDO69	Dielectric oven
IESEB98, IESEB99 and IESEB100 (MACT ZZZZ)	Natural gas-fired combustion air emergency blowers (175 BHP, each)
IESVO149	Vacuum ovens
IESDP151 (MACT ZZZZ)	Diesel-fired fire pump (215 BHP)
IESDP152(MACT ZZZZ)	Diesel-fired fire pump (143 BHP)
IESB133 and IESB134	Hot water boilers for propane farm
IESEP175(MACT ZZZZ)	Propane-fired emergency pump at WWTP (24 BHP)
IESDP95(MACT ZZZZ)	Diesel-fired Emergency process water pump (830 BHP)
IESDC177	Dolomite Lime Storage Silo
IESDG93 (MACT ZZZZ)	Diesel-fired emergency generator, No.1 (750 BHP)
IESST96	NH ₃ Storage Tank
IESV123	S&T Laboratory Hood
IESV124	S&T Laboratory Muffle Furnace Hood
IESV125	S&T Binder Room Hood
IESV130	Buff Shop
IESV132	Maintenance Welding
IESV133	Fab Maintenance Welding
IESQV134	Glass Lab
IESQV135	Glass Lab Chem Hood
IESQV136	Glass Lab Muffle Furnace
IESMV137	NDT Dip Tanks
IESMV138	NDT Wash Station
IESMV139	NDT Test Booth
IESWT187	NDT Wash Booth
IESWT188	NDT Dye Penetrant Tank
IESWT189	NDT Electric Dryer
IESWT140	WWTP Lab Hood
IESWT141 and IESWT143	WWTP Aeration Tanks
IESWT144	Chlorine Contact Tank
IESWT171 through IESWT173	Three Equalization Tanks
IESWT174 and IESWT175	Reaction Tanks
IESWT176	Primary Clarifier
IESWT177	Primary Surge Tank
IESWT178, IESWT179, and IESWT180	Final Clarifiers
IESWT181	Sludge Thickener
IESWT182	Sludge Holding/Lime Stabilization Tank
IESWT183 and IESWT184	Stabilized Sludge Holding Tank
IESWT185	Treated Water Storage Tank
IESWT186	Ammonia Day Tank
IESWT193	Effluent Surge Tank
IESST155, IESST156, IESST157, and IESST158	Oil Storage Tanks
IESWE191	Welker Yarn Conditioner
IESPP150	Propane Flare
IESCQ192	Fab Maintenance Cadmium Welding Vent Hood
IES1	368 Twist Frames

ATTACHMENT to Air Quality Permit Number 02688T42

Insignificant Activities per 15A NCAC 2Q .0503(8)

Emission Source ID	Emission Source Description
IESDP951 (MACT ZZZZ)	Diesel-fired emergency process water supply pump (240 BHP)
IES2	431 Conditioning Racks
IES3 through IES7	Binder Mix Ingredients
IES8	Binder Ingredient Transfer Station
IESDC3 through IESDC7	Five starch bins Nos. 1 through 5 with associated bagfilters (Nos. DC3 through DC7, respectively)
IESDC8	One starch bag and supersak unloading operation with associated bagfilter (No. DC8)
IESDC184	One minor ingredient bin with associated cartridge filter (No. DC184)
IESDC-Super-Sak	One batch supersak unloading operation with associated cartridge filter (No. DC-Supersak)
IBR-STEXH	Binder Storage Room
IES-VS	Housekeeping vacuum system exhausting indoors

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".
3. For additional information regarding the applicability of GACT see the DAQ page titled "The Regulatory Guide for Insignificant Activities/Permits Exempt Activities". The link to this site is as follows: <http://daq.state.nc.us/permits/insig/>



State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
02688T42	02688T41	MM DD, 2017	August 31, 2020

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: Electric Glass Fiber America, LLC

Facility ID: 2900109

Facility Site Location: 473 New Jersey Church Road
City, County, State, Zip: Lexington, Davidson County, North Carolina 27292
Mailing Address: 473 New Jersey Church Road
City, State, Zip: Lexington, North Carolina 27292

Application Number: 2900109.17A, 2900109.17B
Complete Application Date: May 15, 2017, September 19, 2017

Primary SIC Code: 3229
Division of Air Quality,
Regional Office Address: Winston-Salem Regional Office
450 West Hanes Mill Road, Suite 300
Winston-Salem, North Carolina 27105

Permit issued this the DDth day of MM, 2017.

William D. Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

Table Of Contents

SECTION 1: PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

- 2.1- Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)
- 2.2- Multiple Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

DRAFT

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
7	ESB64 ESB66 ESB67 ESB68 (.1109 Case-by-Case MACT)	Four natural gas/propane/No. 2 fuel oil-fired boilers (21.0 million Btu per hour maximum heat input capacity each)	NA	NA
23	Double level fiberglass furnace No. 507, using only EFB technology, consisting of the following:			
	ES-507-M NSPS Subpart CC	natural gas/propane direct-fired melter utilizing 100% oxygen firing and 500 kW electric boost (10,000 pounds per hour glass pull rate)	NA	NA
	ES-507-R	natural gas/propane-fired-refiner	NA	NA
	ES-507-F	natural gas/propane-fired forehearth	NA	NA
19	Single level fiberglass furnace No. 503, using only EFB technology, consisting of the following:			
	ES-503-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (3,500 pounds per hour glass pull rate)	NA	NA
	ES-503-R	natural gas/propane-fired-refiner	NA	NA
	ES-503-F	natural gas/propane-fired forehearth	NA	NA
32	Double level fiberglass furnace No. 509 consisting of the following:			
	ES-509-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (11,186 pounds per hour glass pull rate)	CD-F509ECS-1 CD-F509ECS-2	Dry scrubber with 5-module fabric filter (34,830 square feet of filter area) In series with Packed column wet scrubber
	ES-509-R	natural gas/propane-fired-refiner	NA	NA
	ES-509-F	natural gas/propane-fired forehearth	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
15	Single level fiberglass furnace No. 502, consisting of the following:			
	ES-502-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (3,000 pounds per hour glass pull rate)	CD153	One dry scrubber
	ES-502-R	natural gas/propane-fired-refiner	NA	NA
	ES-502-F	natural gas/propane-fired forehearth	NA	NA
37	ESDC78 ESDC79 ESDC83 ESDC84	Four raw material storage silos	CDDC78 CDDC79 CDDC83 CDDC84	Four cartridge filters (886 square feet of filter media, each)
37	ESDC80 ESDC81 ESDC82	Three raw material storage silos	CDDC81	One cartridge filter (886 square feet of filter media)
37	ESDC88	Scrap material storage silo	CDDC88	One bagfilter (256 square feet of filter media)
37	ESDC85 ESDC86	Two raw material transfer systems	CDDC85 CDDC86	Two cartridge filters (886 square feet of filter media, each)
37	ESDC89	Raw material storage silos	CDDC89	One cartridge filter (886 square feet of filter media)
37	ESDC90	Raw material storage silos	CDDC90	One bagfilter (184 square feet of filter media)
37	ESDC91	Lime storage silo associated with the wastewater treatment operation	CDDC91	One cartridge filter (250 square feet of filter media)
37	ESDC101 and ESDC102	Two blenders (Nos. A and B)	CDDC101 CDDC102	Two cartridge filters (750 square feet of filter area, each)
37	ESDC103 through ESDC107	Five mixed batch storage bins (Nos. 1 through 5)	CDDC103 through CDDC107	Five cartridge filters (1,470 square feet of filter area, each)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
37	ESDC108 ESDC109 ESDC110 ESDC111 ESDC178 ESDC179	One Klug bin (No. 4) Three Klug bins (Nos. 5N, 5S, and 6) Three Klug bins (Nos. 7E, 7S, and 7N) Two Klug bins (Nos. 8E and 8W) One Klug bin (No. 3) One Klug bin (No. 9)	CDDC108 CDDC109 CDDC110 CDDC111 CDDC178 CDDC179	Six cartridge filters (750 square feet of filter area, each)
37	ESDC114	One furnace batch storage bin (No. 503)	CDDC114	One cartridge filter (1,080 square feet of filter area, each)
37	ESDC-115	One furnace batch storage bin (No. 503)	CDDC-115	One cartridge filter (1,080 square feet of filter area, each)
37	ESDC-116	One furnace batch storage bin (No. 503)	CDDC-116	One cartridge filter (1,080 square feet of filter area, each)
37	ESDC117N ESDC117S ESDC119N ESDC119S	One furnace batch storage bin (No. 507N) One furnace batch storage bin (No. 507S) One furnace batch storage bin (No. 509N) One furnace batch storage bin (No. 509S)	CDDC117N CDDC117S CDDC119N CDDC119S	Four cartridge filters (1,080 square feet of filter area, each)
37	ESDC180	One large scale bin	CDDC180	One bagfilter (225 square feet of filter area)
37	ESDC183	One raw material bin (4 th floor)	CDDC183	One cartridge filter (750 square feet of filter area)
41	ES01, ES03 (.1109 Case-by-Case MACT)	Two three lane natural gas-fired fiberglass drying ovens (4.5 million Btu per hour maximum heat input capacity each)	NA	NA
41	ES02 (.1109 Case-by-Case MACT)	One four lane natural gas-fired fiberglass drying oven (5.6 million Btu per hour maximum heat input capacity)	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
41	ES04, ES05, ES06, ES07 (MACT DDDDD)	Four single lane natural gas-fired fiberglass drying ovens (1,320 pounds per hour throughput capacity each, 1.5 million Btu per hour maximum heat input capacity each)	NA	NA
41	OSI-1, OSI-2 (.1109 Case-by-Case MACT)	Two natural gas-fired fiberglass drying ovens #1 and #2 (0.8 million Btu per hour maximum heat input capacity each)	NA	NA
41	ESDO70	One single lane dielectric fiberglass drying oven (1,800 pounds per hour throughput capacity)	NA	NA
37	ES118	Limestone Reagent Bin for CD-F509ECS	CD-DC118	Bin vent filter (1,080 square feet of filter area)
37	ES181	Dust Collection System for CD-F509ECS	CD-DC181	Blower vent filter (960 square feet of filter area)
37	ES182	Klug Bin for CD-F509ECS	CD-DC182	Bin vent filter (480 square feet of filter area)
51	ESBR412	Binder Mix Room	NA	NA
13	ESDG94 (MACT ZZZZ)	Diesel Fuel-fired Emergency Generator No. 2 (925 BHP)	NA	NA
13	ESDG97 (MACT ZZZZ)	Diesel Fuel-fired Emergency Generator, WWTP (1,095 BHP)	NA	NA

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. The following boilers:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESB64, ESB66, ESB67, ESB68	Four natural gas/propane/No. 2 fuel oil-fired boilers (21.0 million Btu per hour maximum heat input capacity each)	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.326 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	(ID Nos. ESB64 and ESB66 only) 40 percent opacity (ID Nos. ESB67 and ESB68 only) 20 percent opacity	15A NCAC 02D .0521
Hazardous air pollutants	Best Combustion Practices (through May 19,2019)	15A NCAC 02D .1109 (CAA 112j)
Hazardous air pollutants	Work Practices, 5- year tune up (beginning May 20, 2019)	15A NCAC 02D .1111 (MACT DDDDD)
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2 B	15A NCAC 02D .1806

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas/propane/No. 2 fuel oil that are discharged from these sources into the atmosphere shall not exceed 0.326 pounds per million Btu heat input, each.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas/propane/No.2 fuel oil in these sources.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane/No. 2 fuel oil in these sources.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**ID Nos. ESB67 and ESB68**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.
- b. Visible emissions from these sources (**ID Nos. ESB64 and ESB66**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- d. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/propane/No. 2 fuel oil in these sources.

4. 15A NCAC 02D .1109: CAA 112(j); CASE-BY-CASE MACT FOR BOILERS AND PROCESS HEATERS

- a. The Permittee shall use best combustion practices when operating these sources. The initial compliance date for this work practice standard and the associated monitoring/recordkeeping/reporting requirements is **July 6, 2013**. These conditions need not be included on the annual compliance certification until after the initial compliance date.
 - i. The Permittee shall comply with this CAA §112(j) standard until **May 19, 2019**. The initial compliance date for the applicable CAA §112(d) standard for “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 20, 2019**, as specified in condition 2.1.A.5. below.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. To ensure compliance, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
 - i. inspect the burner, and clean or replace any components of the burner as necessary;
 - ii. inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and
 - iii. inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected boilers are not inspected and maintained as required above.

- c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of any maintenance performed on the boilers.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- d. No reporting is required for hazardous air pollutants from the firing of natural gas/propane/No. 2 fuel oil in these sources.

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(l)]

- a. For the existing sources(s) designed to burn gas 1 fuels, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."
 - i. The Permittee shall comply with the CAA §112(j) standard in condition 2.1.M.4. above through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [§63.7575]

- b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.
- i. The boilers, as requested by the Permittee, shall meet the definition of a "unit designed to burn gas 1 subcategory," which includes any boiler or process heater that burns only **natural gas**, refinery gas, and/or other gas 1 fuels with the following exceptions:
 - A. The Permittee may burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration.
 - B. The Permittee may only burn liquid fuel during periodic testing, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

- c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [§63.7510(e), §63.56(b)]

- d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019.

Notifications [§63.7545(e)(8), §§63.7530(d),(e),(f)]

- e. The Permittee shall submit a Notification of Compliance Status. The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the

initial tune up and one time energy assessment (whichever is later). The notification shall contain the following:

- i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
- ii. the following certification(s) of compliance, as applicable:
 - A.- "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)" [i.e., conditions h.i. through h.v. and m. ii.]; and
 - B.- "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., condition l.] and is an accurate depiction of the facility at the time of the assessment.
- f. The Permittee shall submit a notification of intent to fire an alternative fuel (i.e., fuel oil) within 48 hours of the declaration of each period of natural gas curtailment or supply interruption. The notification must include the information in §63.7545(f). [§63.7545(f)]

Subcategory Switch Notification [15A NCAC 02Q .0508(f)]

- g. If the Permittee switches fuels or makes a physical change to the boiler and the fuel switch or physical change results in the applicability of a different subcategory, the Permittee must provide notice of the date upon which the Permittee switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:
 - i. The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.
 - ii. The currently applicable subcategory under this subpart.
 - iii. The date upon which the fuel switch or physical change occurred.
- h. The notification required in condition g. above shall be submitted with a permit application consistent with 15A NCAC 02Q .0500 to update the permit with the requirements for the applicable subcategory under 40 CFR 63 Subpart DDDDD.

General Compliance Requirements [§63.7505(a), §63.7500(f)]

- i. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

- j. The Permittee shall conduct a tune-up of the boiler annually as specified below.
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown);
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
 - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject; and
 - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- [§§63.7500(a), (e), §63.7540(a)(10)]

- k. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up. [40CFR 63.7515(d)]
- l. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
[§63.7540(a)(13), §63.7515(g)]
- m. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[§63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in c. through m. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

- n. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart DDDDD, Table 3, with the extent of the evaluation for items (a) to (e) in Table 3 appropriate for the on-site technical hours listed in §63.7575:
[§63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition n. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

- o. The Permittee shall keep the following:
 - i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
[40 CFR 63.7555(a)(1)]
 - ii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
 - (A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
 - (B) a description of any corrective actions taken as a part of the combustion adjustment; and
 - (C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period.
Units sharing a fuel meter may estimate the fuel use by each unit.
[40 CFR 63.7540(a)(10)(vi)]
 - iii. the associated records for conditions i. through n. including:
 - (A) the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [40 CFR 63.10(b)(2)(ii)]
 - iv. records of the calendar date, time, occurrence and duration of each startup and shutdown.
[40 CFR 63.7555(i)]
 - v. records of the type(s) and amount(s) of fuels used during each startup and shutdown.
[40 CFR 63.7555(j)]
 - vi. the following records, pursuant to 15A NCAC 02Q .0508(f):

- A. types of fuels combusted during periods of gas curtailment, gas supply interruption, periodic testing maintenance and operator training;
- B. date and duration of periods of gas curtailment and gas supply interruption; and
- C. date and duration of periods of testing, maintenance and operator training while combusting liquid fuel.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the Permittee burns fuel oil outside of periods of gas curtailment and gas supply interruption, except for the combined total of 48 hours during any calendar year allowed for periodic testing, maintenance, or operator training.

- p. The Permittee shall:
 - i. maintain records in a form suitable and readily available for expeditious review;
 - ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
 - iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions o. through p.

Reporting Requirements [15A NCAC 02Q .0508(f)]

- q. The Permittee shall submit compliance reports to the DAQ on an annual basis, with the exception that the first report shall cover the period beginning on May 20, 2019 and ending on December 31, 2019. Subsequent annual reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30.
[§§63.7550(a), (b), 63.10(a)(4), (5)]
 - i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]
- r. The compliance report must contain the following information:
 - i. Company name and address;
 - ii. Process unit information, emissions limitations, and operating parameter limitations;
 - iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total operating time during the reporting period;
 - iv. If there are no deviations from the requirements of the work practice requirements in condition j. above, a statement that there were no deviations from the work practice standards during the reporting period; and
 - v. Include the date of the most recent tune-up for each unit required according to condition j. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(a) and (c), Table 9]
- s. The report must contain a summary of the records required for condition o.vi.
- t. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
 - i. A description of the deviation and which emission limit or operating limit from which you deviated; and
 - ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in q. through t. are not met.

B. The following sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDG94	Diesel Fuel-fired Emergency Generator No. 2 (925 BHP)	NA	NA
ESDG97	Diesel Fuel-fired Emergency Generator, WWTP (1,095 BHP)	NA	NA

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
visible emissions	20 percent opacity	15A NCAC 02D .0521
toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
hazardous air pollutants	No monitoring, recordkeeping, reporting or notification requirements.	15A NCAC 02D .1111 [40 CFR Part 63, Subpart ZZZZ]

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 63.6590(a)(1)(i)]

- a. For these emission source(s) (existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to limited requirements [40 CFR 63.6590(b)]

- b. Pursuant to 40 CFR 63.6590(b)(3)(iii), these sources do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

C. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Single level fiberglass furnace No. 502, consisting of the following:			
ES-502-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (3,000 pounds per hour glass pull rate)	CD153	One dry scrubber
ES-502-R	natural gas/propane-fired-refiner	NA	NA
ES-502-F	natural gas/propane-fired forehearth	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter from melter, refiner, and forehearth	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	40 percent opacity	15A NCAC 02D .0521
PM ₁₀	55.26 tons per year	15A NCAC 02Q .0317 (PSD Avoidance)
Particulate matter	70.61 tons per year	
Fluorides	19.14 tons per year	
Particulate matter (filterable only)	<u>Melter only, State Enforceable Only</u> 0.5 pounds per ton of glass produced 1.0 pounds per ton of glass produced during control device maintenance	NCGS 143-215.108(c)
Fluorides	<u>Melter only, State Enforceable Only</u> 0.45 pounds per ton of glass pulled (annual basis)	NCGS 143-215.108(c)
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2 B	15A NCAC 02D .1806

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing fiberglass furnace melter (ID No. ES-502-M) in accordance with General Condition

JJ. Testing shall be completed within 180 days after the restart of the furnace, unless an alternate date is approved by the DAQ. If the results of this test, in conjunction with condition e. below, are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

- d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (ID No. ES-502-M) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

If the results of this test, in conjunction with condition e. below, are:

- i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
- ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- e. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	To be determined
PM (condensable)	To be determined

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring / Recordkeeping [15A NCAC 02Q .0508(f)]

- f. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
- i. The records shall include:
- A. the date and approval status of the most recent source test conducted pursuant to condition c. above;
- B. the production rate at which the source test was conducted; and
- C. the maximum production rate achieved since the most recent source test conducted pursuant to condition c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this melter, forehearth and refiner shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a week the Permittee shall observe the emission point of this source for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above. If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.
- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- The date and time of each recorded action;
 - The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCA 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. To comply with this permit and avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions from the Furnace 502, including the melter, refiner, and forehearth, shall not exceed the following limitations:

Regulated Pollutant	Emissions Limitation
PM ₁₀	55.26 tons per consecutive 12-month period
PM	70.61 tons per consecutive 12-month period
Fluorides	19.14 tons per consecutive 12-month period

- i. Operating Restrictions - To ensure emissions do not exceed the limitations above, the pull rate of furnace 502 shall not exceed 3,000 pounds of glass per hour.

Testing/Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. No testing/monitoring/recordkeeping is required from the firing of natural gas/propane in this source.

Reporting [15A NCAC 02Q .0508(f)]

- c. The Permittee shall submit a summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall clearly identify all instances of deviations with this permit, including the identification of any event during which the pull rate of the furnace exceeds 3,000 pounds of glass per hour.

State Enforceable Only

- 5. Pursuant to NCGS 143-215.108(c) and as required by the Special Order of Consent (SOC) (2002-002):
 - a. filterable particulate matter emissions from the melter section of furnace 502 (ID No. ES-502-M) shall be less than 0.5 pounds per ton of glass produced or 1.0 pound per ton of glass produced during periods of control device maintenance.
 - b. fluoride emissions from the from the melter section of furnace 502 (ID No. ES-502-M) shall be less than 0.45 pounds per ton (annual average) of glass pulled.

Testing

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall on an annual basis perform and submit compliance stack testing for fluoride emissions on the Furnace 502 melter stack in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ. If the results of this test are less than 80 percent of 0.45 lb/ton (3-hr average), the Permittee shall be required to stack test once every five years following the last stack test. The testing shall also result in an emission factor for controlled fluoride emissions.
- i. For purposes of condition d., the initial test shall be conducted within 180 days of the restart of furnace 502.

Monitoring

- e. Fluoride emissions shall be controlled by the emission control system (ID No. CD153) except during periods of control device maintenance.
- f. The filterable particulate matter emissions from the melter section of furnace 502 (ID No. ES-502-M) shall be controlled by the ECS (ID No. CD153) except during periods of control device maintenance.
- g. Prior to restart of furnace 502 the Permittee shall submit a permit application to establish monitoring parameters for the emission control system (ID No. CD153).

D. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Single level fiberglass furnace No. 503, using only EFB technology, consisting of the following:			
ES-503-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (3,500 pounds per hour glass pull rate)	NA	NA
ES-503-R	natural gas/propane-fired-refiner	NA	NA
ES-503-F	natural gas/propane-fired forehearth	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (melter, refiner, and forehearth)	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Total PM, PM10, PM2.5, NOx, and Fluorides	Recordkeeping and reporting of actual emissions See Section 2.2 D	15A NCAC 02D .0530(u)
Particulate matter (filterable only)	<u>Melter only, State-enforceable only</u> 1.0 pounds per ton of glass produced	NCGS 143-215.108(c)
Fluorides	<u>Melter only, State Enforceable Only</u> 0.45 pounds per ton of glass pulled (annual basis)	NCGS 143-215.108(c)
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2 B	15A NCAC 02D .1806

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing fiberglass furnace melter (ID No. ES-503-M) in accordance with General Condition JJ. Testing shall be completed within 180 days after the initial start up of the furnace after the completion

of the modifications addressed in application no. 2900109.14A, unless an alternate date is approved by the DAQ.

- i. This testing requirement was satisfied on May 14, 2015.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (ID No. ES-503-M) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

If the results of this test, in conjunction with condition e. below, are:

- i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
 - ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- e. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	0.62 lb/ton of glass pulled
PM (condensable)	0.07 lb/ton of glass pulled

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- f. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
 - i. The records shall include:
 - A. the date and approval status of the most recent source test conducted pursuant to condition d. above;
 - B. the production rate at which the source test was conducted; and
 - C. the maximum production rate achieved since the most recent source test conducted pursuant to condition d. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this melter, forehearth and refiner shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 02D .0521 (c)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a week the Permittee shall observe the emission point of this source for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above. If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.
- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State Enforceable Only

- 4. Pursuant to NCGS 143-215.108(c) and as required by the Special Order of Consent (SOC) (2002-002):
 - a. filterable particulate matter emissions from the melter section of furnace 503 (**ID No. ES-503-M**) shall be less than 1.0 pounds per ton of glass produced.
 - b. fluoride emissions from the from the melter section of furnace 503 (**ID No. ES-503-M**) shall be less than 0.45 pounds per ton (annual average) of glass pulled.

Testing

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Operating Limitations

- d. Fluoride emissions from the melter section of furnace 503 (**ID No. ES-503-M**) shall be controlled by the use of environmentally friendly batch (EFB). EFB is a modified raw material feed to the furnaces and is defined as batch material having an elemental fluorine (F) composition of no greater than 0.9 pounds per ton (batch material).

Monitoring/Recordkeeping

- e. The Permittee shall determine the fluoride emissions on a monthly basis utilizing the mass balance approach as described in Section 2.1.F.4.c. for Furnace 507.
- f. Compliance with the filterable particulate matter emissions from the melter section of furnace 503 (**ID No. ES-503-M**) shall be determined by the testing requirements in condition 2.1.D. 1.d.

Reporting

- g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

E. RESERVED

F. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 507 consisting of the following:			
ES-507-M NSPS Subpart CC	natural gas/propane direct-fired melter utilizing 100% oxygen firing and 500 kW electric boost (10,000 pounds per hour glass pull rate)	NA	NA
ES-507-R	natural gas/propane-fired-refiner	NA	NA
ES-507-F	natural gas/propane-fired forehearth	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (melter, refiner and forehearth)	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	40 percent opacity	15A NCAC 02D .0521
PM _{2.5}	59.58 tons per year	15A NCAC 02Q .0317 (NAA Avoidance)
Particulate matter	70.70 tons per year	15A NCAC 02Q .0317 (PSD Avoidance)
PM ₁₀	59.58 tons per year	
Fluorides	110 tons per year	
Nitrogen oxide	164.64 tons per year	
Carbon monoxide	106.30 tons per year	
Lead	0.6026 tons per year	
Sulfur dioxide	94.26 tons per year	
Particulate matter (filterable only)	Melter only (ID No. ES-507-M) 1.0 pounds per ton of glass produced	15A NCAC 02D .0524 (NSPS Subpart CC)
Fluorides	Melter only, State Enforceable Only 0.45 pounds per ton of glass pulled (annual basis)	NCGS 143-215.108(c)
Toxic air pollutants	State Enforceable Only See Section 2.2 A	15A NCAC 02D .1100
Odors	State Enforceable Only See Section 2.2 B	15A NCAC 02D .1806
Total PM, PM ₁₀ , PM _{2.5} , NO _x , VOC and Fluorides	Recordkeeping and reporting of actual emissions See Section 2.2 C	15A NCAC 02D .0530(u)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour; and
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the fiberglass furnace melter (ID No. ES-507-M) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.
 - i. The initial testing was satisfied on October 1, 2014.

If the results of this test, in conjunction with condition d. below, are:

- i. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
 - ii. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- d. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	0.46 lb/ton of glass pulled
PM (condensable)	0.05 lb/ton of glass pulled

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
 - i. The records shall include:
 - A. the date and approval status of the most recent source test conducted pursuant to condition c. above;
 - B. the production rate at which the source test was conducted; and
 - C. the maximum production rate achieved since the most recent source test conducted pursuant to condition c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane/No. 2 fuel oil in this source.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the refiner (**ID No. ES-507-R**) and forehearth (**ID No. ES-507-F**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once per week the Permittee shall observe the emission points of the refiner and forehearth for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in condition.a above.
- If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.
- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- The date and time of each recorded action;
 - The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and
15A NCAC 02D .0531: SOURCES IN NONATTAINMENT AREAS**

- a. In order to avoid the applicability of 15A NCAC 02D .0530, "Prevention of Significant Deterioration," and 15A NCAC 02D .0531 "Sources in Nonattainment Areas" as requested by the Permittee, emissions from Furnace No. 507, including the melter, refiner, and forehearth, shall not exceed the following limitations:

Regulated Pollutant	Emissions Limitation (tons per consecutive 12-month period)
Particulate matter	70.70
PM ₁₀	59.58

Regulated Pollutant	Emissions Limitation (tons per consecutive 12-month period)
PM _{2.5}	59.58
Fluorides	110.00
Nitrogen Oxides	164.64
Carbon Monoxide	106.30
Lead	0.6026
Sulfur Dioxide	94.26

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Affected Facility	Pollutant/Process Parameter	Test Method
Furnace 507	Particulate matter (including PM ₁₀) PM ₁₀ PM _{2.5} Fluorides Nitrogen oxides Carbon monoxides Lead	per approved protocol
Furnace 507	Furnace-specific emission factors for PM, PM ₁₀ , PM _{2.5} , Fluorides, NO _x , CO, and Lead	calculated from above

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Each calendar month, the Permittee shall retain a record of the following data for Furnace 507 for the previous calendar month:
- Type and quantity of each fuel combusted at the melter and refiner/forehearth (in mmcf/month);
 - Quantity of glass pulled (in tons/month); and
 - Fluoride mass balance (i.e., difference in fluoride concentration in glass batch prior to being pulled through the furnace and glass product) (in lbs/ton glass).
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530, or 15A NCAC 02D .0531 in the case of PM_{2.5}, if the above records are not retained.
- d. **Monthly PM, PM₁₀, and PM_{2.5} Compliance Demonstration:** Each calendar month, the Permittee shall calculate and record the PM, PM₁₀, and PM_{2.5} emissions from Furnace 507 (melter, refiner, and forehearth) in accordance with the equation provided below:
- For the previous calendar month:

$$E_{PM_x} = \frac{Q_{EFB} * F_{PM_x, EFB}}{2,000 \text{ lb/ton}}$$

Where:

- E_{PM_x} = Particulate matter (i.e., PM, PM₁₀, or PM_{2.5}) emissions (in tons/month);
- Q_{EFB} = EFB pulled for the previous calendar month (in tons/month); and
- F_{PM_x, EFB} = Particulate matter (i.e., PM, PM₁₀, or PM_{2.5}) emission factor for EFB as provided in Section 2.1 F.4.c.iii (in lb/ton glass).

- Sum the emissions for the previous 12-month period for PM, PM₁₀, and PM_{2.5} to determine the 12-month rolling emission totals for each pollutant.

iii. The following emission factors shall be used in the calculations listed above:

Pollutant	F _{PMx,EFB}
PM	1.55
PM ₁₀	1.16
PM _{2.5}	1.00

- A. The Permittee shall submit an application for a permit modification within 30 days of revising any emission factor as provided in the table above.
- B. The emission factors listed above may be updated using an administrative permit amendment as provided in 15A NCAC 02Q .0514.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530, or 15A NCAC 02D .0531 in the case of PM_{2.5}, if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in condition a. above.

e. **Monthly Fluoride Compliance Demonstration:** Each calendar month, the Permittee shall calculate and record the fluoride emissions from Furnace 507 (melter, refiner, and forehearth) in accordance with the equations provided below:

i. For the previous calendar month:

$$E_{Fl} = \frac{Q_{EFB} * MB_{Fl,EFB}}{2,000 \text{ lb/ton}}$$

Where: E_{Fl} = Fluoride emissions (in tons/month);
Q_{EFB} = EFB pulled for the previous calendar month (in tons/month); and
MB_{Fl,EFB} = Fluoride mass balance of EFB as described in Section 2.1 F.4.c.iii (in lb/ton).

ii. Sum the fluoride emissions for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in condition a. above.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
 - i. The monthly PM, PM₁₀, PM_{2.5}, and fluoride emissions for the previous 14 months. The emissions must be calculated for each of the 12-month periods over the previous 14 months; and
 - ii. The monthly fuel usage (including type and quantity) for all months of the quarter; and
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart CC, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524, 40CFR 60.293(b)]

- b. The filterable particulate matter emissions from the furnace melter (ID No. ES-507-M) shall not exceed **1.0 pound per ton of glass produced.**

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.293(f)]

- c. The Permittee shall demonstrate compliance with the emission limit in condition b. above on an annual basis by testing the fiberglass furnace melter (ID No. ES-507-M) in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.

The initial testing requirement was satisfied on October 1, 2014.

If the results of this test are:

- i. less than 80 percent of the emission limit in condition b. above, the Permittee shall be required to stack test once every five years following the last stack test; or
- ii. above the limit given in condition b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring [15A NCAC 02Q .0508(f), 40 CFR 60.13 and 60.293]

- d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the furnace melter (ID No. ES-507-M). The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications", 40 CFR 60.13 and 15A NCAC 02D .0613.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any three-hour block average opacity value, excluding periods of startup, shut down, malfunction from the furnace melter (ID No. ES-507-M) exceeds **5.0 percent opacity.**

The three-hour block average opacity limit above was established by using the three 1-hour average opacity values from the compliance stack test and determining the 99% Upper Confidence Limit (UCL) of the three 1-hour averages. The resultant three-hour opacity UCL value was then pro-rated to the NSPS particulate limit (1.0 pounds of PM per ton of glass pulled), by using the average PM emission value determined during the compliance stack test.

A three-hour block average opacity value shall be calculated as the arithmetic average of any and all valid six-minute averages within the three-hour period. A three-hour period means a 180- minute period commencing at 12am, 3am, 6am, 9am, 12pm, 3pm, 6pm, and 9pm each day. Valid six-minute averages are calculated per 40 CFR 60.13.

The Permittee may at anytime, reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the three-hour block average opacity values contained in condition d. above.

- e. For the purposes of 40 CFR 60.293(c)(5) and 60.7, Excess Emissions are defined as all of the 6-minute periods during which the average opacity of the emissions from the furnace melter (ID No. ES-507-M) exceed the 99% UCL values determined from a compliance stack test as provided in 40 CFR 60.293(e) as presented below:
- i. **3.0 percent opacity** when firing natural gas/propane.

The Permittee may at any time, consistent with the provisions of 40 CFR 60.293(e), reestablish, through administratively amending this permit consistent with 15A NCAC 02Q .0500, the UCL values contained in condition e. above.

- f. The Permittee shall calculate the Percent Excess Emissions and the Percent COMS Downtime using the equations listed below:

Percent Excess Emissions (%EE):

$$\%EE = \frac{\text{Duration of Excess Emissions} - \text{Duration of Excess Emissions During StartUp/ ShutDown/ Malfunction}}{\text{Furnace Operating Time} - \text{Duration of StartUp/Shutdown/ Malfunction}} * 100\%$$

Percent COMs Downtime (%CD):

$$\%CD = \frac{\text{COMs Downtime}}{\text{Furnace Operating Time}} * 100\%$$

Where:

<i>Excess Emissions</i>	=	<i>Defined in paragraph e.</i>
<i>Duration of Excess Emissions</i>	=	<i>Summation of the excess emissions in hours during the given calendar three-month period</i>
<i>Duration of Excess Emissions During StartUp/ ShutDown/ Malfunction</i>	=	<i>Summation of the excess emissions in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period</i>
<i>Furnace Operating Time*</i>	=	<i>Summation of the operation time of the source in hours during the given calendar three-month period</i>
<i>Duration of StartUp/ ShutDown/ Malfunction</i>	=	<i>Summation of the operation time of the source in hours occurring during all periods of startup/shutdown/malfunction during the given calendar three-month period</i>
<i>COMs downtime**</i>	=	<i>Summation of time in hours during which the COMs is not operational and concurrent with the Furnace Operating Time during the given calendar three-month period</i>

* If the furnace operates less than 500 hours during any calendar three-month period, the Permittee may perform the above calculations using all of the operating data for the current calendar three-month period and the most recent data for the proceeding calendar three-month period until 500 hours of data are obtained. [N.C.G.S. 143-215.110]

** Quality assurance (QA) activities will be included in this calculation unless exempt by regulation or defined in an agency approved Quality Assurance (QA) Manual. The amount of exempt QA time will be reported in the report per condition k.

Acceptable Operation and Maintenance [15A NCAC 02D .0524, 40CFR 60.293(c)]

- g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the Percent Excess Emissions from the glass melting furnace (melter only, ID No. ES-507-M) exceeds **3 percent** or if the Percent COMS Downtime exceeds **3 percent** in any calendar three-month period (January through March, April through June, July through September October through December).

Recordkeeping [15A NCAC 02Q .0508(f)]

- h. Pursuant to 40 CFR 60.7(b), the Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air

pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

- i. Pursuant to 40 CFR 60.7(f), the Permittee shall maintain records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection. The records shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- j. The Permittee shall record and maintain records of:
 - i. Furnace operating time;
 - ii. Three-hour block average opacity values.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping requirements in conditions h. through j. are not met.

Reporting [15A NCAC 02Q .0508(f)]

- k. On a quarterly basis, the Permittee shall:
 - i. Submit a report containing Percent Excess Emissions, Percent COMs Downtime, and Furnace Operating Time, as defined in condition f. above
 - ii. pursuant to 40 CFR 60.293(c)(5) and 40 CFR 60.7(c), submit an excess emissions and monitoring system performance summary report. The report shall contain the information required per 40 CFR 60.7(c) and (d).
 - iii. submit a report of the three-hour block average opacity values, as defined in condition d., that exceed **5.0 percent opacity**.

The quarterly reports, acceptable to the Regional Air Quality Supervisor, shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.

6. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the glass-melting furnace (melter only, ID No. ES-507-M) shall not be more than 40 percent opacity when averaged over a six-minute period. [15A NCAC 02D .0521(c)]
- b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 40 percent opacity limit shall be determined as follows:[15A NCAC 02D .0521(g)]
 - i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
 - ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 02D .0535(c).

All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 02D .0535.

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The Permittee shall use a continuous opacity monitor system (COMS) to monitor and record opacity from the melter. The COMS shall be calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and 15A NCAC 02D .0613.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given in conditions a. and b. above, or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the COMS data in accordance with the reporting requirements given in condition **2.1.F.5.k.** (Subpart CC reporting requirements). All instances of excess emissions with respect to 15A NCAC 02D .0521 must be clearly identified.

State Enforceable Only

- 7. Pursuant to NCGS 143-215.108(c) and as required by the Special Order of Consent (SOC) (2002-002):
 - a. fluoride emissions from the from the melter section of furnace 507 (ID No. ES-507-M) shall be less than 0.45 pounds per ton (annual average) of glass pulled.

Testing

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Operating Limitations

- c. Fluoride emissions from the melter section of furnace 507 (ID No. ES-507-M) shall be controlled by the use of environmentally friendly batch (EFB). EFB is a modified raw material feed to the furnaces and is defined as batch material having an elemental fluorine (F) composition of no greater than 0.9 pounds per ton (batch material).

Monitoring/Recordkeeping

- d. The Permittee shall determine the fluoride emissions on a monthly basis utilizing the mass balance approach as described in Section 2.1.F.4.c.

Reporting

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

G. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 509 consisting of the following:			
ES-509-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (11,186 pounds per hour glass pull rate))	CD-F509ECS-1	Dry scrubber with 5-module fabric filter (34,830 square feet of filter area)
		CD-F509ECS-2	In series with Packed column wet scrubber
ES-509-R	natural gas/propane-fired-refiner	NA	NA
ES-509-F	natural gas/propane-fired forehearth	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (melter, refiner and forehearth)	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Particulate matter (filterable only)	<u>Melter only, State Enforceable Only</u> 0.5 pounds per ton of glass produced 1.0 pounds per ton of glass produced during control device maintenance	NCGS 143-215.108(c)
Fluorides	<u>Melter only, State Enforceable Only</u> 0.45 pounds per ton of glass pulled (annual basis)	NCGS 143-215.108(c)
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2 B	15A NCAC 02D .1806

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the melter, refiner, and forehearth combined shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels, combustion air and stoichiometric combustion oxygen are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above on an annual basis by testing the Furnace 509 melter stack in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ.
- i. For purposes of condition c., the initial test was satisfied in November 2011. The most recent demonstration was December 2016.

If the results of this test, in conjunction with condition d. below, are:

- A. less than 80 percent of the emission limit in condition a. above, the Permittee shall be required to stack test once every five years following the last stack test; or
 - B. above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.
- d. For the purposes of determination of compliance with condition a., the contribution of particulate matter emissions from the refiner and forehearth are assumed to be:

PM (filterable)	0.46 lb/ton of glass pulled
PM (condensable)	0.05 lb/ton of glass pulled

These emission factors may be revised administratively pending final review and approval of new source test data submitted to the DAQ.

Monitoring / Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request.
- i. The records shall include:
 - A. the date and approval status of the most recent source test conducted pursuant to condition c. above;
 - B. the production rate at which the source test was conducted; and
 - C. the maximum production rate achieved since the most recent source test conducted pursuant to condition c. above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas/propane in this source.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the melter, forehearth and refiner shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once per week the Permittee shall observe the emission points (melter stack, refiner/forehearth stack and melter bypass stack) of this source for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in condition a. above. If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.
- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State Enforceable Only

4. Pursuant to NCGS 143-215.108(c) and as required by the Special Order of Consent (SOC) (2012-01):
 - a. filterable particulate matter emissions from the melter section of furnace 509 shall be less than 0.5 pounds per ton of glass produced or 1.0 pound per ton of glass produced during periods of control device maintenance.
 - b. fluoride emissions from the melter section of furnace 509 shall be less than 0.45 pounds per ton (annual average) of glass pulled.

Testing

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall on an annual basis perform and submit compliance stack testing for fluoride emissions on the Furnace 509 melter stack in accordance with a testing protocol approved by the DAQ and in accordance with General Condition JJ. If the results of this

test are less than 80 percent of 0.45 lb/ton (3-hr average), the Permittee shall be required to stack test once every five years following the last stack test. The testing shall also result in an emission factor for controlled fluoride emissions.

- i. For purposes of condition d., the last test was conducted on April 17, 2013. The controlled fluoride emission factor was determined to be 0.024 lb/ton of glass pulled. This value may be revised administratively pending review of a source test performed pursuant to condition d. above.

Monitoring

- e. Fluoride emissions shall be controlled by the emission control system (ECS) (ID No. CD-F509ECS-1 and -2) except during periods of control device maintenance.
- f. The filterable particulate matter emissions from the Furnace No. 509 melter shall be controlled by the ECS (ID No. CD-F509ECS-1 and -2) except during periods of control device maintenance.

CD-F509ECS-1

- g. The Permittee shall operate, and maintain instrumentation on the dryer scrubber to continuously monitor the following parameter and maintain the parameter in the associated operating range:

Parameter	Operating range
Limestone injection rate	Greater than or equal to 400 pounds per hour

- h. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer and included in the maintenance plan dated May 11, 2011 for the dry scrubber (ID No. CD-F509ECS-1). This plan may be revised administratively by administrative permit amendment. In addition to the manufacturer's inspection and maintenance recommendations, the Permittee shall conduct the following:
 - i. a monthly visual inspection of the system ductwork and components for leaks;
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the systems structural integrity;
 - iii. monitor and record the overall system pressure drop daily.
- i. The pressure drop across each operating filter module shall be between 1 and 12 inches of water.

CD-F509ECS-2

- j. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer and included in the maintenance plan submitted December 21, 2012 for the wet scrubber (ID No. CD-F509ECS-2). This plan may be revised administratively by administrative permit amendment.
- k. The Permittee shall install, operate, and maintain instrumentation on the wet scrubber to continuously monitor the following parameters and maintain the parameters in the associated operating ranges:

Parameter	Operating range**
Pressure drop*	0.8-8.0* inches water column, daily average
pH	6.0 - 9.0 (daily average)
Minimum scrubber sump level for make-up liquid	31%, daily average
Recirculated liquid injection rate	500 gpm, minimum-

* nominal operating range – for monitoring purposes only

** these values may be administratively revised upon DAQ review and approval

Recordkeeping

- l. The Permittee shall record, retain on site (in written or electronic format) and make available to an authorized representative upon request, the following information:
 - i. The average hourly fluoride pre control emission rate, determined weekly on a mass balance basis in units of pounds per hour and pounds per ton of glass pulled;
 - ii. The average hourly mass injection rate of limestone into the dry scrubber (ID No. CD-F509ECS-1), determined daily;
 - iii. The average hourly fluoride batch material addition rate, determined weekly;
 - iv. The average hourly glass pull rate, determined daily;
 - v. The number of hours when the ECS (ID Nos. CD-F509ECS-1 and -2) is not in operation concurrently with furnace operation on a weekly basis;
 - vi. The average fluoride emissions rate, in pounds per hour and pounds per ton of glass pulled, on a weekly basis;
 - vii. The average fluoride emissions rate, in pounds per ton of glass pulled, on 12-month rolling average basis;
 - viii. Items i. through iv. as determined during the performance test required in condition d. above;
 - ix. Parameters identified in condition k above; and
 - x. The primary fan speed (i.e. frequency in Hz), dilution air intake into the dry scrubber (CFM) and baghouse exit temperature (°F).
- m. The results of the monitoring activities shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the ECS (ID Nos. CD-F509ECS-1 and -2); and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

Reporting

- n. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- o. The Permittee shall submit the results of any maintenance performed on the ECS (ID No. CD-F509ECS-1 and -2) within 30 days of a written request by the DAQ.
- p. The Permittee shall submit a summary of the wet scrubber performance parameters and air flow characteristics (condition l. ix. and x.) vs. glass production rate within 30 days of a written request by the DAQ.

H. The following sources:

Table 2.1.H

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDC78 ESDC79 ESDC83 ESDC84	Four raw material storage silos	CDDC78 CDDC79 CDDC83 CDDC84	Four cartridge filters (886 square feet of filter media, each)
ESDC80 ESDC81 ESDC82	Three raw material storage silos	CDDC81	One cartridge filter (886 square feet of filter media)
ESDC88	Scrap material storage silo	CDDC88	One bagfilter (256 square feet of filter media)
ESDC85 ESDC86	Two raw material transfer systems	CDDC85 CDDC86	Two cartridge filters (886 square feet of filter media, each)
ESDC89	raw material storage silo	CDDC89	One cartridge filter (886 square feet of filter media)
ESDC90	raw material storage silo	CDDC90	One bagfilter (184 square feet of filter media)
ESDC91	Lime storage silo associated with the wastewater treatment operation	CDDC91	One cartridge filter (250 square feet of filter media)
ESDC101	One blender (No. A)	CDDC101	One cartridge filter (750 square feet of filter area)
ESDC102	One blender (No. B)	CDDC102	One cartridge filter (750 square feet of filter area)
ESDC103 through ESDC107	Five mixed batch storage bins (Nos. 1 through 5)	CDDC103 through CDDC107	Five cartridge filters (1,470 square feet of filter area, each)
ESDC111	Two Klug bins (Nos. 8E and 8W)	CDDC111	One cartridge filter (750 square feet of filter area)
ESDC110	Three Klug bins (Nos. 7E, 7S, and 7N)	CDDC110	One cartridge filter (750 square feet of filter area)
ESDC109	Three Klug bins (Nos. 5N, 5S, and 6)	CDDC109	One cartridge filter (750 square feet of filter area)
ESDC108 ESDC178 ESDC179	One Klug bin (No. 4) One Klug bin (No. 3) One Klug bin (No. 9)	CDDC108 CDDC178 CDDC179	Three cartridge filters (750 square feet of filter area, each)
ESDC114	One furnace batch storage bin (No. 503)	CDDC114	One cartridge filter (1,080 square feet of filter area)
ESDC-115	One furnace batch storage bin (No. 503)	CDDC-115	One cartridge filter (1,080 square feet of filter area, each)
ESDC-116	One furnace batch storage bin (No. 503)	CDDC-116	One cartridge filter (1,080 square feet of filter area, each)
ESDC117 N	One furnace batch storage bin (No. 507N)	CDDC117N	One cartridge filter (1,080 square feet of filter area)
ESDC117S	One furnace batch storage bin (No. 507S)	CDDC117S	One cartridge filter (1,080 square feet of filter area)
ESDC119	One furnace batch storage bin (No. 509N)	CDDC119N	One cartridge filter (1,080 square feet of filter area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDC119S	One furnace batch storage bin (No. 509S)	CDDC119S	One cartridge filter (1,080 square feet of filter area)
ESDC180	One large scale bin	CDDC180	One bagfilter (225 square feet of filter area)
ESDC183	One raw material bin (4 th floor)	CDDC183	One cartridge filter (750 square feet of filter area)
ES118	Limestone Reagent Bin for CD-F509ECS	CD-DC118	Bin vent filter (1,080 square feet of filter area)
ES181	Dust Collection System for CD-F509ECS	CD-DC181	Blower vent filter (960 square feet of filter area)
ES182	Klug Bin for CD-F509ECS	CD-DC182	Bin vent filter (480 square feet of filter area)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity 40 percent opacity (ID Nos. ESDC108 through ESDC111, ESDC178, and ESDC179 only)	15A NCAC 02D .0521
Total PM, PM10, PM2.5, NOx, VOC and Fluorides	Recordkeeping and reporting of actual emissions See Section 2.2 D	15A NCAC 02D .0530(u)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the above listed emission sources shall be controlled as described in Table 2.1H. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. A annual visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's/cartridge's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters/cartridges are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the control systems; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the control systems within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (**excluding those identified in condition b. below**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. 15A NCAC 02D .0521 (d)]
- b. Visible emissions from these sources (**ID Nos. ESDC108 through ESDC111, ESDC178, and ESDC179**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. 15A NCAC 02D .0521(c)]

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in conditions a. and b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. To ensure compliance, once a month the Permittee shall observe the emission point of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:

- i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
- ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in conditions a. or b. above, as applicable.

If the above-normal emissions are not corrected per condition d.i. above or if the demonstration in condition d.ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

I. The following ovens

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ESDO70	One single lane dielectric fiberglass drying oven (1,800 pounds per hour throughput capacity)	NA	NA
OSI-1, OSI-2	Two natural gas-fired fiberglass drying ovens #1 and #2 (0.8 million Btu per hour maximum heat input capacity each)	NA	NA
ES01, ES03	Two three lane natural gas-fired fiberglass drying ovens (4.5 million Btu per hour maximum heat input capacity each)	NA	NA
ES02	One four lane natural gas-fired fiberglass drying oven (5.6 million Btu per hour maximum heat input capacity)	NA	NA
ES04, ES05, ES06, ES07	Four single lane natural gas-fired fiberglass drying ovens (1,320 pounds per hour throughput capacity each, 1.5 million Btu per hour maximum heat input capacity each)	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour <u>Process stacks only</u>	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input <u>(excluding ESDO70)</u>	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous air pollutants	Best Combustion Practices (ES01, ES02, ES03, OSI-1, OSI-2)	15A NCAC 02D .1109 (CAA 112j)
Particulate matter	0.49 lb per million Btu heat input <u>(excluding ESDO70)</u> <u>Combustion stacks only</u>	15A NCAC 02D .0503
Hazardous air pollutants	Work Practices, tune ups (ES04 through ES07) (ES01, ES02, ES03, OSI-1, OSI-2) beginning May 20, 2019	15A NCAC 02D .1111 (MACT DDDDD)
Total PM, PM10, PM2.5, NOx, VOC and Fluorides	Recordkeeping and reporting of actual emissions See Section 2.2 C	15A NCAC 02D .0530(u)
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2 A	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2 B	15A NCAC 02D .1806

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the process stacks of these sources shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall maintain production records such that the process rates "P" can be derived as specified above, and shall make these records available to the DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- d. The Permittee shall submit a summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from the combustion stacks of these sources (**excluding ID No. ESD070**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these sources.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points from these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in condition a. above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .1109: CAA 112(j); CASE-BY-CASE MACT FOR BOILERS AND PROCESS HEATERS

- a. The Permittee shall use best combustion practices when operating the affected sources (**ID Nos. ES01 through ES03, OSI-1, and OSI-2**). The initial compliance date for this work practice standard and the associated monitoring/recordkeeping/reporting requirements is **July 6, 2013**. These conditions need not be included on the annual compliance certification until after the initial compliance date.
 - i. The Permittee shall comply with this CAA §112(j) standard until **May 19, 2019**. The initial compliance date for the applicable CAA §112(d) standard for “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 20, 2019**, as specified in condition 7. below.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. To ensure compliance, the Permittee shall perform an annual inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
 - i. inspect the burners, and clean or replace any components of the burners as necessary;
 - ii. inspect the flame pattern and make any adjustments to the burners necessary to optimize the flame pattern; and
 - iii. inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected sources are not inspected and maintained as required above.

- c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of any maintenance performed on these sources.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- d. No reporting is required for hazardous air pollutants from the firing of natural gas in these sources.

5. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of permitted fuels that are discharged from these sources (**excluding ID No. ESD070**) into the atmosphere shall not exceed 0.49 pounds per million Btu heat input. [15A NCAC 02D .0503(a)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- d. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or No.2 fuel oil in these sources.

6. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485]

- a. For the sources (**ID Nos. ES04-ES07**) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR 63.7575]

- b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

- c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7495(a)]

- d. The Permittee shall comply with the applicable requirements upon startup of the sources.

Notifications [40 CFR 63.7545]

- e. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. [40 CFR 63.7545(c)]
- f. The Permittee shall submit an initial Notification of Compliance Status. The notification shall contain the following:

- i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
- ii. the following certification(s) of compliance, as applicable:
 - i.- "This facility complies with the required initial tune-up according to the procedures in condition h.i. through h.v. and l. ii." (40 CFR 63.7540(a)(10)(i) through (vi)); and

The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune-up.

[40 CFR 63.7545(e), 63.7530(d),(f)]

General Compliance Requirements [40 CFR 63.7505(a), .7500(f)]

- g. The Permittee shall be in compliance with the work practice standards in this subpart. These limits apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

- h. The Permittee shall conduct a tune-up of the sources every five years as specified below.
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary
 - A. The Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the Permittee must inspect each burner at least once every 72 months.
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown)
 - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject.
 - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).
Measurements may be taken using a portable CO analyzer.

[40CFR 63.7500(a), 63.7540(a)(12)]

- i. For these sources, each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted within 61 months after the initial startup of the source. [40 CFR 63.7515(d)]
- j. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.[40 CFR 63.7540(a)(13), 63.7515(g)]
- k. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in g. through k. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

- l. The Permittee must keep the following:
 - i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
 - ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:

- A. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
- B. A description of any corrective actions taken as a part of the combustion adjustment; and
- C. The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[40 CFR 63.7540(a)(10)(vi)]
- iii. The associated records for conditions g. through k. including:
 - A. the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment.
[40 CFR 63.10(b)(2)]
- iv. maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.
[40 CFR 63.7555(i)]
- v. maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.
[40 CFR 63.7555(j)]
- m. The Permittee shall:
 - i. maintain records in a form suitable and readily available for expeditious review;
 - ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
 - iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained per conditions l. through m.

Reporting Requirements [15A NCAC 02Q .0508(f)]

- n. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31.
[40 CFR 63.7550(a),(b)]
 - i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]
- o. The compliance report must contain the following information:
 - i. Company name and address;
 - ii. Process unit information, emissions limitations, and operating parameter limitations;
 - iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total operating time during the reporting period;
 - iv. If there are no deviations from the requirements of the work practice requirements in condition h. above, a statement that there were no deviations from the work practice standards during the reporting period; and
 - v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
[40 CFR 63.7550(a) and (c), Table 9]
- p. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
 - i. A description of the deviation and which emission limit or operating limit from which you deviated; and

- ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in n. through p. are not met.

7. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, .7490(d), .7499(l)]

- a. For the sources(s) designed to burn gas 1 fuels (**ID Nos. ES01, ES02, ES03, OSI-1, OSI-2**), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."
- i. The Permittee shall comply with the CAA §112(j) standard in condition 4. above through **May 19, 2019**. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [40 CFR 63.7575]

- b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.7565]

- c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7510(e), 63.56(b)]

- d. The Permittee shall complete the initial tune ups and the one-time energy assessment no later than May 20, 2019.

Notifications [40 CFR 63.7545(e)(8), 63.7530(d),(e),(f)]

- e. The Permittee shall submit a Notification of Compliance Status. The notification shall contain the following:
 - i. a description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.
 - ii. the following certification(s) of compliance, as applicable:
 - A.- "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)' [i.e condition g.i. through g.v. and m. i.]; and
 - B.- "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)" [i.e., condition k.] and is an accurate depiction of the facility at the time of the assessment.

The notification must be signed by a responsible official and sent before the close of business on the 60th day following the completion of the initial tune up and one time energy assessment (whichever is later).

General Compliance Requirements [40 CFR 63.7505(a), 63.7500(f)]

- f. The Permittee shall be in compliance with the work practice standards in this subpart. These standards apply at all times the affected unit is operating.

Work Practice Standards [15A NCAC 02Q .0508(f)]

- g. The Permittee shall conduct a tune-up of the process heaters (except **ID No. ES02**) every five years as specified below. Process heater (**ID No. ES02**) shall conduct a tune up on a biennial basis.
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner (except **ID No. ES02**) must be inspected at least once every 72 months.
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown)
 - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject.
 - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[40 CFR 63.7500(a), (e), 63.7540(a)(10), (11), (12)]
- h. Each biennial and 5-year tune-up shall be conducted no more than 25 months or 61 months after the previous tune-up, respectively. [40CFR 63.7515(d)]
- i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.[40 CFR 63.7540(a)(13), 63.7515(g)]
- j. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 CFR 63.7500(a)(3)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in f. through j. are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7500(a)(1), Table 3]

- k. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must include the following items, with the extent of the evaluation for items (i) to (v) appropriate for the on-site technical hours listed in 40 CFR 63.7575:
 - i. A visual inspection of the boiler or process heater system;
 - ii. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints;
 - iii. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator;
 - iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
 - v. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified;
 - vi. A list of cost-effective energy conservation measures that are within the facility's control;
 - vii. A list of the energy savings potential of the energy conservation measures identified; and
 - ix. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in condition k. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555]

- l. The Permittee shall keep the following:
 - i. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
 - ii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
 - A. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured before and after the adjustments of the source;
 - B. A description of any corrective actions taken as a part of the combustion adjustment; and
 - C. The type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.[40 CFR 63.7540(a)(10)(vi)]
 - iii. The associated records for conditions f. through k. including:
 - A. the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment.[40 CFR 63.10(b)(2)(ii)]
 - iv. maintain records of the calendar date, time, occurrence and duration of each startup and shutdown. [40 CFR 63.7555(i)]
 - v. maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown. [40 CFR 63.7555(j)]
- m. The Permittee shall:
 - i. maintain records in a form suitable and readily available for expeditious review;
 - ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
 - iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.[40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in conditions l. through m.

Reporting Requirements [15A NCAC 02Q .0508(f)]

- n. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in condition d. and ending on the earliest December 31st following a complete 5-year period. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 31. [40 CFR 63.7550(a), (b)]
 - i. This report must also be submitted electronically through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due the report the Permittee submit the report to the at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.7550(h)(3)]
- o. The compliance report must contain the following information:
 - i. Company name and address;
 - ii. Process unit information, emissions limitations, and operating parameter limitations;

- iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total operating time during the reporting period;
 - iv. If there are no deviations from the requirements of the work practice requirements in condition g. above, a statement that there were no deviations from the work practice standards during the reporting period; and
 - v. Include the date of the most recent tune-up for each unit required according to condition g. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown.
[40 CFR 63.7550(a) and (c), Table 9]
- p. If you have a deviation from a work practice standard during the reporting period, the report must contain the following information:
- i. A description of the deviation and which emission limit or operating limit from which you deviated; and
 - ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.
[40 CFR 63.7550(a) and (d), 63.7540(b), Table 9]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in n. through p. are not met.

J. The following source:

Emission Source ID	Emission Source Description	Control Device ID No	Control Device Description
ESBR412	Binder Mix Room	NA	NA

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Toxic air pollutants	<u>State Enforceable Only</u> See Section 2.2.A.	15A NCAC 02D .1100
Odors	<u>State Enforceable Only</u> See Section 2.2.B.	15A NCAC 02D .1806

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in condition a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from this source.

2.2- Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-wide emission sources

State Enforceable Only

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the air toxics compliance demonstration approved on April 18, 2013, the following emission limits in Table 2.2.A.1, in units of pounds per hour, shall not be exceeded:

Table 2.2.A.1

Stack ID No	Stack Description	Acetic acid	Acrolein	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Fluoride	Formaldehyde
ES01	Three Lane Oven - Combined Stack	2.65	NA	1.24E-06	4.59E-05	2.86E-06	5.32E-05	9.36E-04	NA	2.52E-03
ES02	Four Lane Oven - Combined Stack	2.65	NA	1.54E-06	5.71E-05	3.56E-06	6.62E-05	1.17E-03	NA	3.13E-03
ES03	Three Lane Oven - Combined Stack	2.65	NA	1.24E-06	4.59E-05	2.86E-06	5.32E-05	9.36E-04	NA	2.52E-03
ES04	Single Lane Oven - Combined Stack	2.65	NA	4.13E-07	1.53E-05	9.53E-07	1.77E-05	3.12E-04	NA	8.39E-04
ES05	Single Lane Oven - Combined Stack	2.65	NA	4.13E-07	1.53E-05	9.53E-07	1.77E-05	3.12E-04	NA	8.39E-04
ES06	Single Lane Oven - Combined Stack	2.65	NA	4.13E-07	1.53E-05	9.53E-07	1.77E-05	3.12E-04	NA	8.39E-04
ES07	Single Lane Oven - Combined Stack	2.65	NA	4.13E-07	1.53E-05	9.53E-07	1.77E-05	3.12E-04	NA	8.39E-04
OSI1	OSI Oven 1 - Combined Stack	2.65	NA	2.20E-07	8.16E-06	5.08E-07	9.46E-06	1.66E-04	NA	4.47E-04
OSI2	OSI Oven 2 - Combined Stack	2.65	NA	2.20E-07	8.16E-06	5.08E-07	9.46E-06	1.66E-04	NA	4.47E-04
ESDO69	Dielectric Oven	2.65	NA	NA	NA	NA	NA	NA	NA	NA
ESDO70	Dielectric Oven	2.65	NA	NA	NA	NA	NA	NA	NA	NA
VO149	Vacuum Ovens	4.80	NA	NA	NA	NA	NA	NA	NA	NA
ESB64	Boiler #2 (64)	NA	NA	5.89E-06	2.18E-04	1.36E-05	2.53E-04	4.45E-03	NA	0.058
ESB66	Boiler #3 (66)	NA	NA	5.89E-06	2.18E-04	1.36E-05	2.53E-04	4.45E-03	NA	0.058
ESB67	Boiler #4 (67)	NA	NA	5.89E-06	2.18E-04	1.36E-05	2.53E-04	4.45E-03	NA	0.058
ESB68	Boiler #5 (68)	NA	NA	5.89E-06	2.18E-04	1.36E-05	2.53E-04	4.45E-03	NA	0.058
ESPP150	Propane Fare	NA	NA	NA	1.04E-05	NA	NA	NA	NA	4.79E-04
ESTE167	TEC Boiler	NA	NA	NA	1.04E-05	NA	NA	NA	NA	4.79E-04
ESDG93	Diesel Generator #1	NA	0.042	3.03E-05	0.021	8.76E-04	1.78E-04	2.46E-03	NA	3.24E-03
ESDG94	Diesel Generator #2	NA	0.052	3.74E-05	0.026	1.08E-03	2.19E-04	3.03E-03	NA	4.00E-03
ESDP95	Process Water Diesel	NA	0.047	3.36E-05	0.023	9.69E-04	1.97E-04	2.72E-03	NA	3.59E-03
ESDG97	WWTP Diesel Generator West	NA	0.061	4.43E-05	0.030	1.28E-03	2.59E-04	3.59E-03	NA	4.73E-03

Stack ID No	Stack Description	Acetic acid	Acrolein	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Fluoride	Formaldehyde
ESEB98	Natural Gas Emergency Air Blower	NA	9.69	0	0.012	0	0	0	NA	0.529
ESEB99	Natural Gas Emergency Air Blower	NA	9.69	0	0.012	0	0	0	NA	0.529
ESEB100	Natural Gas Emergency Air Blower	NA	9.69	0	0.012	0	0	0	NA	0.529
ESDP951	Process Water Pump	NA	0.158	9.70E-06	7.99E-03	2.80E-04	5.69E-05	7.86E-04	NA	0.016
ESDP151	Diesel Fire Pump	NA	0.141	8.69E-06	7.16E-03	2.51E-04	5.09E-05	7.05E-04	NA	0.014
ESDP152	Diesel Fire Pump	NA	0.094	5.78E-06	4.76E-03	1.67E-04	3.39E-05	4.69E-04	NA	9.24E-03
ESEP175	Propane Emergency Pump	NA	1.33	0	1.66E-03	0	0	0	NA	0.073
ESB133	Hot Water Boiler for Propane Farm	NA	NA	NA	8.74E-06	NA	NA	NA	NA	4.79E-04
ESB134	Hot Water Boiler for Propane Farm	NA	NA	NA	8.74E-06	NA	NA	NA	NA	4.79E-04
WELD	SV133,132	NA	NA	NA	NA	NA	NA	2.74E-03	NA	NA
ESCQ192	Fab Maint. CD Weld Hood	NA	NA	NA	NA	NA	NA	1.37E-03	NA	NA
ESBR412	Binder Mix Room	2.54	NA	NA	NA	NA	NA	NA	NA	NA
ES1	Twist Frames	18.84	NA	NA	NA	NA	NA	NA	NA	NA
ES2	Conditioning Racks	1.82	NA	NA	NA	NA	NA	NA	NA	NA
502ECS	Furnace 502 Emiss Control	NA	NA	2.59E-05	9.62E-04	5.99E-05	1.11E-03	0.020	1.599	0.053
EPR6	Furnace 502 Refiner	NA	NA	4.38E-06	1.63E-04	1.01E-05	1.88E-04	3.32E-03	0.089	8.91E-03
EPF7	Furnace 502 Forehearth #1	NA	NA	4.38E-06	1.63E-04	1.01E-05	1.88E-04	3.32E-03	0.044	8.91E-03
EPF8	Furnace 502 Forehearth #2	NA	NA	4.38E-06	1.63E-04	1.01E-05	1.88E-04	3.32E-03	0.044	8.91E-03
EPM9	Furnace 503 Melter	NA	NA	2.19E-05	8.11E-04	5.05E-05	9.40E-04	0.017	1.35	0.044
EPR10	Furnace 503 Refiner	NA	NA	3.70E-06	1.37E-04	8.54E-06	1.59E-04	2.80E-03	0.075	7.52E-03
EPF11	Furnace 503 Forehearth #1	NA	NA	3.70E-06	1.37E-04	8.54E-06	1.59E-04	2.80E-03	0.037	7.52E-03
EPF12	Furnace 503 Forehearth #2	NA	NA	3.70E-06	1.37E-04	8.54E-06	1.59E-04	2.80E-03	0.037	7.52E-03
EPM21	Furnace 507 Melter	NA	NA	9.08E-05	3.37E-03	2.10E-04	3.90E-03	6.86E-02	5.597	0.184
EPR22	Furnace 507 Refiner #1	NA	NA	9.21E-06	3.41E-04	2.13E-05	3.96E-04	6.96E-03	0.31	0.019
EPF24	Furnace 507 Forehearth #1	NA	NA	9.21E-06	3.41E-04	2.13E-05	3.96E-04	6.96E-03	0.08	0.019
EPF25	Furnace 507 Forehearth #2	NA	NA	9.21E-06	3.41E-04	2.13E-05	3.96E-04	6.96E-03	0.078	0.019
EPF26	Furnace 507 Forehearth #3	NA	NA	9.21E-06	3.41E-04	2.13E-05	3.96E-04	6.96E-03	0.078	0.019
EPF27	Furnace 507 Forehearth #4	NA	NA	9.21E-06	3.41E-04	2.13E-05	3.96E-04	6.96E-03	0.078	0.019

Stack ID No	Stack Description	Acetic acid	Acrolein	Arsenic	Benzene	Beryllium	Cadmium	Chromium	Fluoride	Formaldehyde
509ECS	Furnace 509 Emiss Control	NA	NA	9.57E-05	3.55E-03	2.21E-04	4.11E-03	0.072	5.962	0.195
EMPR36	Furnace 509 Refiner #1	NA	NA	1.28E-05	4.75E-04	2.96E-05	5.51E-04	9.70E-03	0.331	0.026
EPF38	Furnace 509 Forehearth #1	NA	NA	1.28E-05	4.75E-04	2.96E-05	5.51E-04	9.70E-03	0.110	0.026
EPF39	Furnace 509 Forehearth #2	NA	NA	1.28E-05	4.75E-04	2.96E-05	5.51E-04	9.70E-03	0.110	0.026
EPF40	Furnace 509 Forehearth #3	NA	NA	1.28E-05	4.75E-04	2.96E-05	5.51E-04	9.70E-03	0.110	0.026
WWTP	WWTP	0.16	NA	NA	NA	NA	NA	NA	NA	NA

Monitoring/Recordkeeping

- b. The Permittee shall record, retain on site (in written or electronic format) and make available to an authorized representative upon request, the following information:
 - i. Records sufficient to show that the permitted emission rates above are not exceeded.

Reporting

- c. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

B. Facility-wide emission sources

State Enforceable Only

1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

- a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

C. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Double level fiberglass furnace No. 507 consisting of the following:			
ES-507-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing and 500 kW electric boost (10,000 pounds per hour glass pull rate)	NA	NA
ES-507-R	natural gas/propane-fired-refiner	NA	NA
ES-507-F	natural gas/propane-fired forehearth	NA	NA
ES04, ES05, ES06, ES07	Four single lane natural gas-fired fiberglass drying ovens (1,320 pounds per hour throughput capacity each, 1.5 million Btu per hour maximum heat input capacity each)	NA	NA

1. 15A NCAC 02D. 0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

- a. The Permittee has used projected actual emissions to avoid applicability of Prevention of Significant Deterioration requirements for a project consisting of modifications to Furnace 507 and the addition of four drying ovens and is fully described in application no. 2900109.13D and a project consisting of modifications to the forehearth of Furnace 507 and is fully described in application no. 2900109.15B.

In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the testing, record keeping and reporting requirements in conditions b. through e. below.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ.

Recordkeeping [15A NCAC 02D .0530(u)]

- c. The Permittee shall maintain records of actual emissions for total PM, PM₁₀, PM_{2.5}, nitrogen oxides, fluorides, and VOCs in tons per year on a calendar year basis for ten years following the resumption of regular operations upon commencement of the modifications described in application no. 2900109.13D.
- d. The reported actual emissions (post-construction emissions) of Furnace 507 (melter, refiner and forehearth) and the four ovens (ID Nos. ES04 through ES07) for each of the ten calendar years will be compared to the projected actual emissions (pre-construction projection) for these sources as included below:

Pollutant	Projected Actual Emissions* (tons per year)
PM	56.48
PM ₁₀	49.47
PM _{2.5}	41.15
NOx	102.69
VOC	27.78
Fluorides	4.93

- * These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the permittee shall include in its annual report an explanation as to why the actual rates exceeded the projection.

The Permittee shall make the information, documented and maintained in this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).

Reporting [15A NCAC 02D .0530(u)]

- e. The Permittee shall submit a report for total PM, PM₁₀, PM_{2.5}, nitrogen oxides, fluorides and VOCs to the Director within 60 days after the end of each calendar year during which the records in conditions c and d. must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).

D. The following emission sources:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Single level fiberglass furnace No. 503, using only EFB technology, consisting of the following:			
ES-503-M	natural gas/propane direct-fired melter utilizing 100% oxygen firing (3,500 pounds per hour glass pull rate)	NA	NA
ES-503-R	natural gas/propane-fired-refiner	NA	NA
ES-503-F	natural gas/propane-fired forehearth	NA	NA
ESDC-115	One furnace batch storage bin (No. 503)	CDDC-115	One cartridge filter (1,080 square feet of filter area, each)
ESDC-116	One furnace batch storage bin (No. 503)	CDDC-116	One cartridge filter (1,080 square feet of filter area, each)

1. 15A NCAC 02D. 0530(u); USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

- a. The Permittee has used projected actual emissions to avoid applicability of Prevention of Significant Deterioration requirements for a project consisting of modifications to Furnace 503 and the addition of two batch bins and is fully described in application no. 2900109.14B.

In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the testing, record keeping and reporting requirements in conditions b. through e. below.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ.

Recordkeeping [15A NCAC 02D .0530(u)]

- c. The Permittee shall maintain records of actual emissions for total PM, PM₁₀, PM_{2.5}, nitrogen oxides, and fluorides in tons per year on a calendar year basis for ten years following the resumption of regular operations upon commencement of the modifications described in application no. 2900109.14B.
- d. The reported actual emissions (post-modification emissions) of Furnace 503 (including the melter, refiner and forehearth) for each of the ten calendar years will be compared to the projected actual emissions (pre-construction projection) for Furnace 503 (including the melter, refiner and forehearth) as included below:

Pollutant	Projected Actual Emissions* (tons per year)
PM	20.3
PM ₁₀	16.7
PM _{2.5}	15.0
NO _x	38.5
Fluorides	1.73

- * These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the permittee shall include in its annual report an explanation as to why the actual rates exceeded the projection.

The Permittee shall make the information, documented and maintained in this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).

Reporting [15A NCAC 02D .0530(u)]

- e. The Permittee shall submit a report for total PM, PM₁₀, PM_{2.5}, nitrogen oxides, and fluorides from these sources to the Director within 60 days after the end of each calendar year during which the records in condition d. must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).

SECTION 3 - GENERAL CONDITIONS (version 5.1, 08/03/2017))

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NO_x budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements

constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.

3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess

emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).

2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes

applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR § 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or

the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 02Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. Third Party Participation and EPA Review [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound